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AMENDMENT

IN THE CLAIMS:

Please cancel claims 1-3, 5-10 and 17-25 without prejudice or disclaimer.

Please amend claims 4, 11-16 and 26-28 as follows:

4. (Amended) A process for generating a combinatorial library, comprising the steps of:
- (a) preparing a plurality of immobilized molecules selected from a nucleoside and a nucleotide; wherein each molecule contains 3 to 10 reactive moieties, each reactive moiety being blocked by a blocking group, wherein at least three of the blocking groups on each immobilized molecule are independently removable under at least three different conditions; and
  - (b) removing each blocking group and derivatizing the resulting reactive moiety in a preprogrammed, regioselective manner; wherein each member of the plurality of immobilized molecules is uniquely derivatized at at least one reactive moiety with a unique substituent, thereby generating a combinatorial library.
11. (Amended) A process of claim 4, wherein the reactive moieties are selected from OH, SH, NH<sub>2</sub>, CO<sub>2</sub>H, SOH, SO<sub>2</sub>H, SO<sub>3</sub>H, CHO, keto, phosphate, phosphite, phosphoramidite, halogen, CN, CNS, NCS and NCO.
12. (Amended) A process of claim 4, wherein the immobilized molecules have been immobilized based on linkage to a solid support.
13. (Amended) A process of claim 12, wherein the solid support is selected from beads, flat supports, wafers with pits, wafers without pits, wafers with channels, wafers without channels, bottom surface of a microtiter plate, and inner walls of a capillary.
14. (Amended) A process of claim 13, wherein the beads are comprised of a material selected from polystyrene, polyamide, cellulose, agarose, dextran cross-linked with epichlorohydrin, silica gel, controlled pore glass (CPG), and polytetrafluoroethylene.